

**AMENDMENTS TO THE SPECIFICATION:**

Please amend the 1<sup>st</sup> paragraph at page 2 of the specification as follows:

However, the conventional planar inverted F antenna has a size of 1/4 of a wavelength, which is smaller than a general size of conventional microstrip antenna, which is 1/2 of a wavelength, but the conventional planar inverted F antenna is still large to be implemented into a mobile terminal. Accordingly, there has been demanded a technology reducing the size of the conventional planar inverted F antenna. Furthermore, a technology maintaining or widening a bandwidth of the conventional planar inverted F antenna ~~[[have]]~~ has ~~[[been]]~~ also been demanded since the bandwidth of the conventional planar inverted F antenna is also reduced in correspondence to the size of the conventional planar inverted F antenna.

Please amend the 2<sup>nd</sup> paragraph at page 2 of the specification as follows:

For overcoming the above mentioned drawback, Terry Kinchun Lo and Yeongming Whang ~~discloses~~ disclose a technology for widening a bandwidth by punching various shapes of slots such as shapes of L or U and uses various feeding methods. The bandwidth is widened according to a length and a width of the slots. However, it is getting more complicated for designing the conventional planar inverted F antenna.

Please amend the paragraph bridging pages 2 and 3 of the specification as follows:

Furthermore, Kathleen L. Virga and Yahya Rahmat-Smaii disclose another technology for widening a bandwidth in "Low Profile Enhanced-Bandwidth PIFA antenna for Wireless Communication Packaging", IEEE TRANSACTION ON MICROWAVE THEORY AND TECHNIQUES, vol. 45, No. 10, pp 1879-1888, October, 1997. For widening the frequency

bandwidth, Kathleen and Yahya ~~implements~~ implement additional patches to an antenna or two patches connected by timing diode as a radiation device. As a result, a frequency bandwidth is getting wider, e.g., 14% of bandwidth is increased than the linear antenna or dipole antenna. However, the antenna introduced by Kathleen and Yahya is complicated and a manufacturing cost is increased.

Please amend the 3<sup>rd</sup> paragraph at page 5 of the specification as follows:

As shown in FIG. 2, the planar inverted F antenna 200 includes a radiation patch 210, an additional radiation patch 240, a shorting plate 220, a feeding line 230 and a ~~[[grand]]~~ ground plate 250.

Please amend the paragraph bridging pages 6 and 7 of the specification as follows:

The additional radiation patch 240 extends the electrical length of the radiation patch 210. The additional radiation patch 240 is coupled at one side of the radiation patch 210 which is opposite end having the shorting plate 220. A length  $h_{sub.s}$  of the additional radiation patch 240 must be shorter than the length  $h$  of the ~~radiation patch 210~~ shorting plate 220. Also, the length  $h_{sub.s}$  and a width  $w_{sub.s}$  of the additional radiation patch 240 are determined according to the desired resonant frequency.

Please amend the paragraph bridging pages 7 and 8 of the specification as follows:

As shown in FIG. 3, the planar inverted F antenna 300 has a structure identical to the planar inverted F antenna 200 in FIG. 2 excepting a location of an additional radiation patch 310. The additional radiation patch 310 is coupled to a length side A of the radiation patch 210 having an asymmetric shape of linearly tapered rectangular having a plurality of corrugated hollows. Since the other structure of the planar inverted F antenna 300 is the same as ~~[[to]]~~ the planar

inverted F antenna 200 in FIG. 2, detailed descriptions of the planar inverted F antenna 300 are omitted.

Please amend the 2<sup>nd</sup> paragraph at page 8 of the specification as follows:

Also, the present invention can provide longer electrical length ~~comparing~~ compared to similar size of conventional antenna by a planar inverted F antenna having a linearly tapered rectangle shape of radiation patch having a plurality of corrugated hollows and additional radiation patch.